

REMARKS

By this amendment, applicants have amended claim 5 to correct a typographical error.

Claims 2 - 4 and 6 - 8 stand rejected under 35 USC 103(a) as allegedly being unpatentable over United States Patent No. 4,596,122 to Kantner in view of United States Patent No. 4,912,934 to Itoh et al. Applicants traverse this rejection and request reconsideration thereof.

The rejected claims relate to a production method for an absorption refrigerator using a refrigerant and its absorption solution. The claims set forth the step of heating a surface of at least a part of a heat exchanger and high temperature generator in atmosphere (claims 2, 3 and 6-8) or in an atmosphere in which an oxygen partial pressure or steam partial pressure is higher than atmospheric air (claim 4). This process can form an oxide film on the surface, as more specifically recited in claims 3, 4 and 6-8. This production method has an effect that a fairly dense film is formed on the surface.

The Kantner patent discloses a system for controlling a sorption heat pump. While the construction and mode of operation of the heat pump are described in great detail in Kantner, the Kantner patent contains little, if any, discussion of the production method for producing the heat pump. Clearly, as apparently admitted by the Examiner, the Kantner patent does not disclose the step of heating a surface of at least part of a heat exchanger and high temperature generator in atmosphere or in an atmosphere in which an oxygen partial pressure or steam partial pressure is higher than atmospheric

air. In fact, there does not appear to be any discussion of the formation of an oxide film or any other corrosion protection film in Kantner.

It should be kept in mind that the claims in the present application are not drawn to an absorption refrigerator, but to the production method therefor. The Kantner patent has little, if any, teaching concerning a production method, and clearly does not disclose the production method presently claimed.

In the Itoh et al '934 patent, the inside wall of a high temperature regenerator is provided with a composite film of molybdenum oxides and iron oxide by, as described in the passage at column 5, lines 45 - 66, subjecting the regenerator to a film-forming operation while exposed to an aqueous lithium molybdate solution. In Example 1 of Itoh et al '934, steel plate is dipped in a film-making tank filled with an aqueous 10% lithium molybdate solution while, in Example 2 of Itoh et al '934, an aqueous 20% lithium molybdate solution is sealed as a film-forming solution into the high temperature regenerator. Thus, the Itoh et al '934 patent does not disclose heating a surface of at least part of a heat exchanger and high temperature regenerator in atmosphere or in an atmosphere in which an oxygen partial pressure or steam partial pressure is higher than atmospheric air, as presently claimed. Accordingly, the Itoh et al '934 patent does not disclose the presently claimed production method.

Claims 2, 3 and 6 - 8 require the step of heating at least part of a heat exchanger and high temperature generator in atmosphere. On the other hand, in Itoh et al '934, the surface that is to be protected from corrosion is heated in a film forming solution, but not heated in atmosphere. Claim 4 requires the step of heating in an atmosphere in which an oxygen partial pressure or steam partial pressure is higher than atmospheric air. In

Itoh et al '934, however, the surface is covered with a film forming solution, not a gas atmosphere.

Since neither Kantner nor Itoh et al, nor even the combination thereof, would have disclosed or suggested the production method of the present invention, it is submitted claims 2 - 4 and 6 - 8 are patentable over the proposed combination of references.

Applicants note the indication that claim 5 is allowed.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli, Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 503.34897CC3), and please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES

IN THE CLAIMS:

5. (Amended) A production method of an absorption refrigerator using a refrigerant and its absorption solution, comprising:

oxidizing a surface of at least a part of a heat exchanger and high temperature regenerator at a temperature of 200-800°C in atmosphere; and

adjusting the heating temperature and heating retaining time so that a value of parameter (P) obtained according to an equation $P = T(5 + \log t)$, wherein T is a heating temperature (°K) and t is a heating retaining time (minute), is 3.5-6.0 x 10³.